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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,314	01/12/2001	Christian Kunert	WEI0020	1786

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EXAMINER
COLAIANNI, MICHAEL

ART UNIT	PAPER NUMBER
1731	9

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/759,314	Kunert et al.
Examiner	**Art Unit**
Michael Colaianni	1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jan 12, 2001*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-20* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *3, 6, 8*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claim Rejections - 35 USC § 112

1.The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 refers to a "decomposition temperature" which is deemed to be indefinite because it is not clear which temperature that language is referring to (i.e. the melt temperarture, the glass transition temperature, the sublimation temperature).

Claim 1 also uses the the language "especially glass melts" which deemed to be indefinite because it is not clear if the claims are meant to be limited to such a melts or if it is intended to include other types of melts.

Claim 3, line 2, "the plastic" lacks antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-6, 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Boen et al. 4660212.

Boen teaches a structural component for glass melting which includes a base metal made of copper (Fig. 2, ref. no. 8; col. 3, lines 25-30, col. 4, lines 15-20); a cooling system for removing heat from the structural component (abstract); and the base body being coated with a coating material having a "decomposition temperature" below the temperature of the melt wherein the cooling system maintains the temperature of the structural element below the "decomposition temperature" of the coating (col. 3, lines 25-45, The "decomposition temperature" was interpreted by the Examiner to be the melting point of the coating. Thus, maintaining the coating above its "decomposition temperature" is inherently taught by Boen because if the stainless steel coating were not kept below its "decomposition temperature" the copper would become exposed to the corrosive environment and melt or corrode thus making the device unsuitable for glass melting. However, Boen teaches using the device for glass melting (col. 4 lines 15-20) which inherently means that the cooling must be controlled to render the device capable of adequately supporting the molten glass.)

Boen also teaches that the stainless steel coating is 20 to 40 microns thick (col. 3, lines 28-32).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 7-8, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boen et al. 4660212 in view of Richards 6109062.

Boen teaches applicant's claimed invention. See the §102(b) rejection for Boen's teachings. However, Boen does not teach using the structure as an agitator or a means for introducing gases into the melt.

However, Richards teaches that it is well known to use a cooled structure for both agitating and injecting gas into a glass melt (Figure 3; Figure 4; col. 3, lines 55-68). Also, Boen

teaches that any particular shape may be used in forming the cooled structure (col. 4, lines 25-30) which is understood to include an electrode holder.

It would have been prima facie obvious at the time the invention was made to combine Richards' teachings with Boen's glass melting structural component because Boen teaches that any particular shape may be used in forming the cooled structure (col. 4, lines 25-30). Also, Boen teaches that the structure may be used in forming cooled induction plasma torches, which are similar to the torches used by Richards (Fig. 4).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boen 4660212 in view of Macedo et al. 6334337.

Boen teaches applicant's claimed invention. See the §102(b) rejection for Boen's teachings. However, Boen does not teach using the structure as an electrode holder.

However, Macedo et al. teaches that it is known to use a coated, cooled structure as an electrode in mixing a glass melt (Fig. 3). Also, Boen teaches that any particular shape may be used in forming the cooled structure (col. 4, lines 25-30) which is understood to include an electrode holder.

It would have been prima facie obvious at the time the invention was made to combine Macedo et al.'s teachings with Boen's glass melting structural component because Boen teaches that any particular shape may be used in forming the cooled structure (col. 4, lines 25-30).

9. Claims 2-3, 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boen 4660212 in view of Gustafson 4122718 and Hynd 3498778.

Boen teaches applicant's claimed invention. See the §102(b) rejection for Boen's teachings. However, Boen does not teach using plastic or halogenated plastic as the coating material.

However, Gustafson teaches that it is well known to coat sensors and other equipment that are placed in mixing tanks that hold corrosive materials with fluoroplastic material (col. 4, lines 7-24; col. 5, lines 7-21, Fig. 6). Moreover, Hynd teaches that it is known to use internal cooling of a glass melt stirrer to enhance the structural strength of the refractory material composing the stirrer (col. 4, lines 27-34). Thus, using a fluoroplastic coating in a corrosive environment, such as a glass melt, on an internally cooled stirrer would have been obvious given Gustafson's and Hynd's teachings.

It would have been prima facie obvious at the time the invention was made to combine Gustafson's and Hynd's teachings with Boen's glass melting structural component for the reasons given in the body of the rejection.

10. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boen 4660212 in view of Gustafson 4122718, Hynd 3498778 and Richards 6109062.

Boen in view of Gustafson and Hynd teach applicant's claimed invention. See the §103(a) rejection for Boen in view of Gustafson and Hynd's teachings. However, Boen in view of Gustafson and Hynd do not teach the plastic coated structural component is used as a agitator.

However, Richards teaches that it is well known to use a cooled structure for both agitating and injecting gas into a glass melt (Figure 3; Figure 4; col. 3, lines 55-68).

It would have been prima facie obvious at the time the invention was made to combine Richards' teachings with Boen in view of Gustafson and Hynd's glass melting structural component because Boen teaches that any particular shape may be used in forming the cooled structure (col. 4, lines 25-30). Also, Boen teaches that the structure may be used in forming cooled induction plasma torches, which are similar to the torches used by Richards (Fig. 4). Moreover, using the fluoroplastic coated agitator would have been obvious given its known anti-corrosive properties as taught by Gustafson (col. 4, lines 7-24).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Colaianni whose telephone number is 703-305-5493. The examiner can normally be reached on Monday to Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on (703) 308-1164. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7115.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Art Unit 1731
March 16, 2003

MICHAEL COLAIANNI
PRIMARY EXAMINER